

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 029869.06-WO	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/US05/09797	International filing date (day/month/year) 23 March 2005 (23.03.2005)	Priority date (day/month/year) 24 March 2004 (24.03.2004)	
International Patent Classification (IPC) or national classification and IPC IPC: A61K 35/00(2006.01),38/10(2006.01);C07K 14/00(2006.01) USPC: 514/1,2;530/300			
Applicant FASGEN, LLC			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>3</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of ___ sheets, as follows:</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand 21 October 2005 (21.10.2005)		Date of completion of this report 17 September 2008 (17.09.2008)	
Name and mailing address of the IPEA/ US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201		Authorized officer Robert C. Hayes, Ph.D. Telephone No. 571-272-1600	

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/US05/09797

Box No. I Basis of the report

1. With regard to the **language**, this report is based on:

- ☒ the international application in the language in which it was filed.
- ☐ a translation of the international application into English, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3(a) and 23.1(b))
- ☐ publication of the international application (under Rule 12.4(a))
- ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))

2. With regard to the **elements** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

- ☒ the international application as originally filed/furnished
- ☒ the description:
- pages 1-19 as originally filed/furnished
- pages* NONE received by this Authority on _____
- pages* NONE received by this Authority on _____
- ☒ the claims:
- pages 20 as originally filed/furnished
- pages* NONE as amended (together with any statement) under Article 19
- pages* NONE received by this Authority on _____
- pages* NONE received by this Authority on _____
- ☒ the drawings:
- pages 1-10 as originally filed/furnished
- pages* NONE received by this Authority on _____
- pages* NONE received by this Authority on _____

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☒ The amendments have resulted in the cancellation of:

- ☒ the description, pages NONE
- ☒ the claims, Nos. NONE
- ☒ the drawings, sheets/figs NONE
- ☒ the sequence listing (*specify*): NONE
- ☒ any table(s) related to the sequence listing (*specify*): NONE

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

5. ☐ This report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 70.2(e)).

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/US05/09797**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims <u>3-4</u>	YES
	Claims <u>1, 2 and 5-9</u>	NO
Inventive Step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-9</u>	NO
Industrial Applicability (IA)	Claims <u>1-9</u>	YES
	Claims <u>NONE</u>	NO

2. Citations and Explanations (Rule 70.7)

Claims 1-2 & 5-8 lack novelty under PCT Article 33(2) as being anticipated by Tracey et al (US Patent 6,423,705).

Tracey et al teach compositions comprising direct AMPK inhibitors (e.g., column 8) for use in methods to treat stroke and stroke-related ischemia (e.g., column 3).

Claims 1, 2, 6, 7 & 9 lack novelty under PCT Article 33(2) as being anticipated by Sheng et al (2002).

Sheng et al teach methods of using tetrahydroacridine (EDT) to inhibit stroke and stroke-related ischemia (e.g., see Abstract), which therefore reasonably meets the limitation of an indirect inhibitor of AMPK; absent evidence to the contrary.

Claims 1-3 & 5-8 lack an inventive step under PCT Article 33(3) as being obvious over Tracey et al (US Patent 6,423,705) in view of Kim et al (2002).

Tracey et al is as described above. However Tracey et al do not teach the AMPK inhibitors C75 or Compound C.

Kim et al teach the AMPK inhibitor C75 administered to patients.

It would have been obvious to one of ordinary skill in the art to use the AMPK inhibitor C75 of Kim in the method of Tracey et al because Kim teach C75 is an AMPK inhibitor amendable to administration to subjects.

Claims 1-2 & 4-8 lack an inventive step under PCT Article 33(3) as being obvious over Tracey et al (US Patent 6,423,705) in view of Leon et al (2002).

Tracey et al is as described above. However Tracey et al do not teach the AMPK inhibitors C75 and Compound C.

Leon et al teach the AMPK inhibitor "compound C" administered to subjects inhibits excitatory responses (i.e., glutaminergic responses).

It would have been obvious to one of ordinary skill in the art to use the AMPK inhibitor "compound C" in the method of Tracey et al because Leon teach "compound C" is an AMPK inhibitor and inhibits excitatory responses in subjects.

Claims 1-9 meet the criteria set out in PCT Article 33(4), and thus methods of treating stroke and ischemia with AMPK inhibitors have industrial applicability because the subject matter claimed can be made or used in industry.

----- NEW CITATIONS -----